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(54) Title: INSECT CHYMOTRYPSIN AND INHIBITORS THEREOF

(57) Abstract: The present invention relates generally to a novel chymotrypsin that exhibits resistance to a plant serine proteinase inhibitor. More particularly, the present invention provides a chymotrypsin which is up-regulated in the gut of *Helicoverpa armigera* and *Helicoverpa punctigera* insect larvae when fed the serine proteinase inhibitors of *Nicotiana glauca*. The novel chymotrypsin represents, therefore, a target for the identification of antagonists including inhibitors which are proposed to be useful in the control of *Helicoverpa* spp. populations that have become resistant to serine proteinase inhibitors produced in plants. The antagonists of the chymotrypsin may be topically applied to the plants or, when in proteinaceous form, may be produced by genetic means in plant cells. The antagonists may act at the level of gene expression or protein activity.

WO 2004/094630 A1